「感性主体のデザインプロセスモデル」プリントメディアデザインに特化した評価

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Evaluating the “Emotional Response Sensitive Design Process” Model -with Particular Reference to Print Media Design

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Prior to this article, the authors discussed the possibility of fusing the Japanese philosophy of Kansei with the Western idea of the design process, and endeavored to set out an extended model, namely the “Emotional Response Sensitive Design Process” model, that might positively influence designers’ future decision-making process (McIlhargey & Istek, 2019). The authors also concluded that further research is necessary to evaluate and confirm this model in reality of design process application with the goal of understanding the questions like whether there is any interest and need for such model within the design community, or whether the proposed techniques should be carefully examined through specific lenses to help inform the designers conscious experience, and thereby the design processes. This article has the goal to gain greater insight, particularly into the Print Media design process with questions like: “How do designers try to convey emotional messages through the Print Media design choices?” and, “in order to do so, which design elements do they utilize?” Or, “when designing, do they even consider the emotional response of their target users?” and if so, “to what extent, do they let the emotional responses influence their design decision making process?” Based on an online survey conducted amongst international designers, data was gathered in order to understand the designer’s perspective on user experience, and in particular, what tools designers gravitate towards when conveying a message.

Keyword ——— Design Process, User Experience, Decision-making, Emotional Response, Print Media Design.

Understanding if there is a need for a higher predictability of the emotional viewer response and a corresponding design process model will be the main focus of the survey analysis.

Highlights

- The earlier proposed model “Emotional Response Sensitive Design Process” is tested.
- An international survey allowed an analysis of the designer’s workflow through the Print Medium design process.
- There is an extensive interest of designers in their target users’ emotional response.
- The proposed model can make designers better predict those emotional responses.
- The model leads to a higher user satisfaction, thus to a better ‘user experience’ – a cross-disciplinary design concept.

1. Introduction

This is a subsequent article on the research exploring the possibility of fusing the Japanese philosophy of ‘Kansei’ with the Western idea of the design process into an extended model. The authors had two interrelated driving questions: 1) How can we anticipate the emotional reaction, in other words ‘Kansei’, of the target audience to our design work? 2) And, is there a way to predict these user reactions more precisely? In a previous article (McIlhargey & Istek, 2019), the authors began with an inquiry into the ideology of the Japanese ancient word ‘Kansei’ (感性 in Japanese; meaning “sensitivity”, “sensibility”, “feeling” and “emotion” in English) that has been widely used by implementing the techniques that we know as “Kansei Engineering" (KE). KE has great potentials, mostly product developers, industrial designers and engineers have so far utilized the impactful theory of Kansei. However, to open up to other disciplines of design, thus to facilitate the designers’ deliberate attempts to ‘design for better User Experience (UX)’, there is a need to improve the Western concept of the design process by mapping Kansei related questions onto the various stages of the design process. In order to do so and to find out what beneficial impacts it could have on the conceptual design world of UX, the authors at first laid the ground work for the further explorations, that would link Kansei to the Western concept of the design process. After reviewing how the idea and therefore the design process concept have developed in the Western world over the last decades, the authors continued with analyzing the design process model of Aspelund (2010) that is used as a base for discussion in the research. Aspelund’s work was chosen, because it is one of the well-illustrated design process models including the participatory and prototyping stages,

and taught at over 40 universities in the U.S. alone. Even though it might be arguable if a stage-structured model really captures the complex design process in all details, it is necessary for this research, as the content offers firstly a theoretical structure to reflect on methodology, and secondly allows conclusions about a general design thought process of a designer. Therefore, the main idea was to find important linking points of Kansei in order to conclude with an extended model of design decision making process named “Emotional Response Sensitive Design Process”, that would allow all forms of conceptual design work to benefit from the philosophy of Kansei. The authors finally concluded that the ‘Kansei-induced’ model might allow designers to get a better understanding of the emotional impact of their work on their users.

In this article, the proposed model is evaluated particularly in reality of the Print Media design process application in order to gain an understanding of the questions like whether there is any interest and need for the proposed model within the international design community, or whether the proposed techniques should be carefully examined through specific lenses to help inform the Print Media and Graphic designers conscious experience and thereby the design processes. Touching upon the characteristics of the Print Media design process (without limitations to the Industrial design) might benefit from the methodology of Kansei, thus allow designers from across various design disciplines to get a better understanding of the emotional impact of their conceptual design decisions on their end-users in comparison with other design processes. In particular, creating print media designs, that firstly appeal to the target group and secondly may lead to a sustainable end-user relationship, is the goal and should be the major driver of, for example, any print-based campaign related project (Figure 1). Kansei can function as a useful tool in many different forms of methodologies throughout the design process, and create a more successful outcome of the design project. This is simply because the base of Kansei is to deeply understand the emotional instincts and relations of the end-user. If this is correctly rooted into the design process, a more targeted and tailor-made solution for the specific end-user group can be created. That can then lead to a higher user satisfaction, thus to a better UX – a trans-disciplinary design (i.e. Co-design) concept.

Figure 1. A print media design example campaigning for the Mazda’s sport car, MX-5 Miata (Mazda, 2019); Kansei Engineering (KE) has been reported to create this car, along with a number of other successful consumer products emerged in Japan (Nagamachi 1999).

2. User Experience (UX) and Kansei

UX can easily be called the buzzword in the design world of our current time. In this section, the connection of UX and Kansei will be established, in order to grasp the gigantic potential of the Kansei concept. Definitions of UX describe it as “every aspect of the user’s interaction with a product, service, or company that makes up the user’s perceptions of the whole. UX design as a conceptual design discipline is concerned with all the elements that together make up that interface, including layout, visual design, text, brand, sound, and interaction” (“Glossary: User Experience” 2016). UX is often just limited to the idea of Interface and Digital Media design. But, the idea of UX is much larger than that. In the context of this research, UX is referred to the process of how people are reacting and interacting with design work in general. Therefore, it is relevant to understand the meaning of UX in Print Media design and in what ways and due to which parameters we can measure and implement it into the design work itself.

The general framework of UX consists of three major factors. These are *Usability, Look*, and *Feel*. This concept is a widely spread understanding of UX as used and practiced by a multitude of designers.

2.1. Usability

The factor of Usability in Print Media and Graphic design has very different elements than in that of other design fields, as the actual user interaction cannot be that easily traced, in comparison to Digital Media design, where clicks and visitors can be measured without an effort. The first element of Usability is the 'Hierarchy' in Print Media design (Figure 2). It describes the way information is organized on a page. It is stated that the primary task of Graphic Design is to create a strong, consistent 'Visual Hierarchy' in which important elements are emphasized, and content is organized logically and predictably (Lynch & Horton 2016). This statement boils down to the basic idea of UX: the hierarchy should make it easy for a reader to use/understand the design work and its content. A clear and easy to read and understand print media is also considered to be a successful UX! How eye-catching is the design work as a whole? How well does it lead the eyes? How do the elements of the design convey the message? These are all factors that create a successful hierarchy of Print Media design, and lead lastly to an effective UX. The second usability element is 'Consistency', which contains the basic design rules of alignment, repetition, and proximity. The consistency in the message and elements of design that are arranged together, in order to create a comprehensive design work as well as similarities that enable the user to understand and connect the message the designer is conveying with the work. The third element of Usability in Print Media design is 'Legibility'. Users in general tend to skim passages of text and pick out the most important pieces of information. So, the key is to allow the reader/user to quickly pick out these important parts of information, and smoothly guide him through the text. The important information must be easy to read and access.

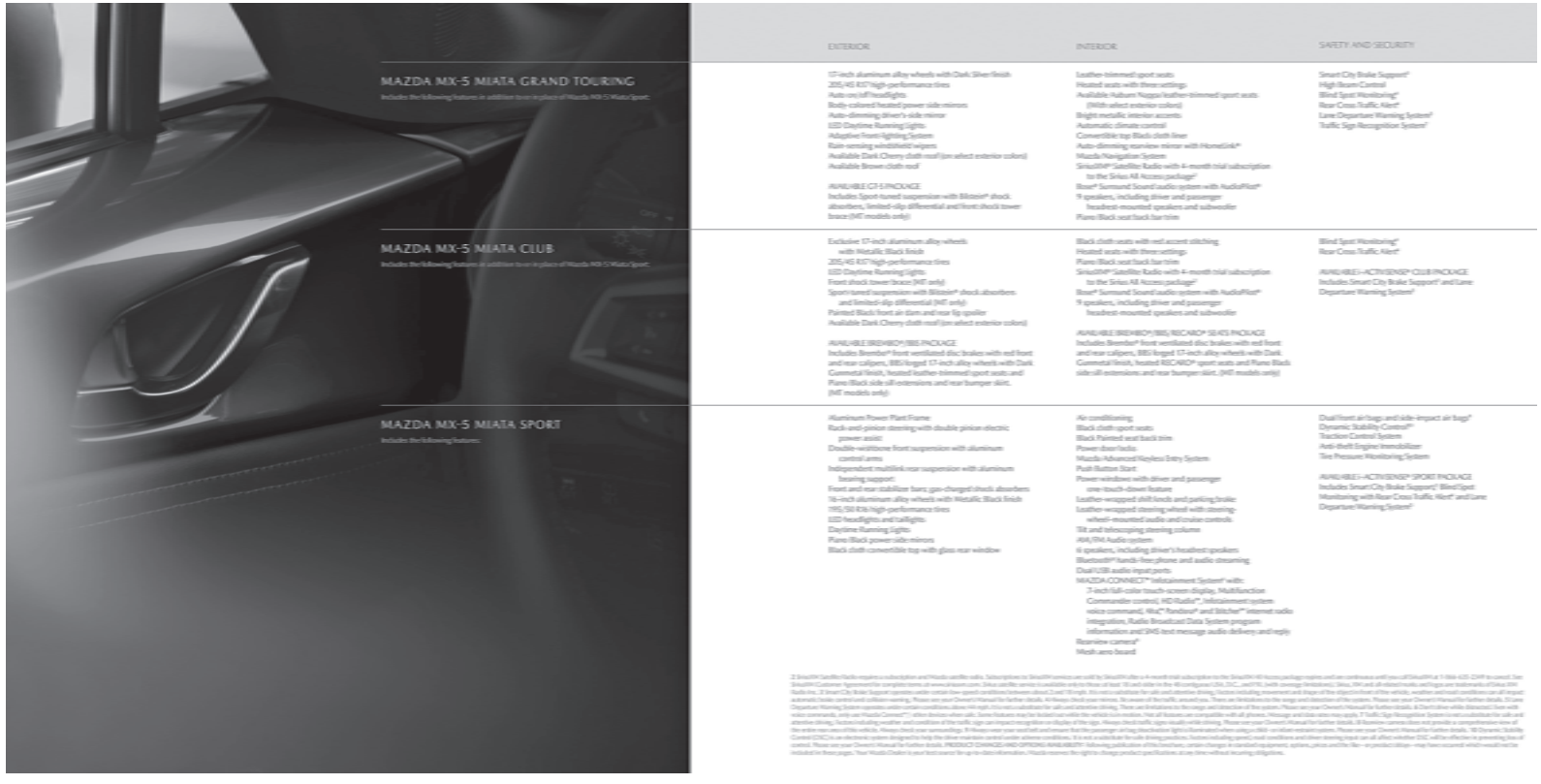

Figure 2. The Usability factor revisited in the print media design campaigning for the Mazda's sport car, MX-5 Miata (Mazda, 2019, p.19).

2.2. Look

The second factor of UX is Look. While this factor overlaps with the ideas of Kansei, it describes authenticity, plausibility, harmony as well as vibe and feeling of trust that can be evoked through a design work. By creating a design work that incorporates these elements of Look into the design, the user has a pleasant reaction, and therefore a good experience with the print design media (Figure 3). The notion of brand identity and recognition also play into the factor Look. As it is not just about presenting a product, service, or message, it is important to connect the content with the brand or company that is sending it to its target clientele. If a look can communicate authenticity, harmony, a good vibe, and feeling of trust, the Kansei of a user is likely to be positive. Here, we can very clearly see the connection of UX and Kansei. As UX aims at creating an overall good UX, an elementary part of that is to create a look that makes user feel comfortable, interested, and trustful. The factor Look is clearly concerned with creating a visual impression upon the users that leads to a positive reaction, or as we would call it Kansei.

2.3. Feel

The third and last factor is Feel. This factor connects to the idea of Kansei in a different way. Feel is mainly concerned with the 'Joy of Use'. How do users interact and lastly react to the visual data they are presented with? In Print Media design, it is more about understanding the reaction than the interaction, as the interaction itself is reduced to the viewing/reading of the printed media. So, the reaction towards the visual data is what Print Media designers should be most concerned with. Where the factor Look is mainly based on creating a look that conveys certain feelings of comfort to the user, the factor Feel goes beyond that. It is about conveying a targeted emotion through visual data, which exceeds the ideas of creating a general positive response (Figure 4). Kansei, therefore, fits into these parameters even more. As Kansei in the factor of Look was mainly a tool of understanding a general positive or negative response, the factor of Feel takes full advantage of the entirety of the user's Kansei. The factor Feel talked about a sustainable emotional bond with the user rather than an instant reaction toward visual material. For example, a prominent and successful brand that is beefing from the emotional bond with their users is Apple (Swanner 2014). Kansei words and expressions can allow a deeper insight into the success of the factor Feel in UX design. The idea of the factor Feel and the ideology of Kansei are overlapping to a great extend. This factor of UX design is the one that could benefit most for utilizing the many benefits of Kansei by implementing them into the design process.

Figure 3. The Look factor revisited in the print media design campaigning for the Mazda’s sport car, MX-5 Miata (Mazda, 2019, p.16).

Figure 4. The Feel factor revisited in the print media design campaigning for the Mazda's sport car, MX-5 Miata (Mazda, 2019, p.8).

3. Conceptualization and Implementation of Survey

After establishing the connection of UX and Kansei in the context of Print Media design, let us now focus on the current status amongst the international design community. An online survey was conducted under a publicly accessible link for at least three months (see Appendix, Table 1a, b, c). The link was shared in several designer communities like Behance, International Council of Design Network, as well as shared with Istanbul Bilgi University’s design alumni. The total number of valid participants of the survey was 39 designers from a total of 18 different countries from all around the world.

Data was generated in order to understand the designer’s perspective on UX, and in particular, what tools designers gravitate towards when conveying a message (see Appendix, Table 2). The idea was to create a survey set-up that would firstly allow an evaluation of how much expected emotional responses are already considered during the design process, and then secondly when within the design process they are considered. The first part of the survey (Questions 1-3) was dedicated to gain a further understanding of how impactful the ideology of Kansei could be for the design process, and how and in what way the aspects of Kansei are new for the designer’s working procedure of today. The second part of the survey (Questions 4-16) was created in order to gain insight into which tool/parameters of Print Media designers gravitate to in order to communicate these emotional messages. The idea was to analyze if certain design tools are evaluated as stronger emotional messengers than others, and therefore to see in what ways anticipated emotional responses are altering the design decision-making process of the designer.

4. Analysis and Findings of Survey Data

Firstly, the quantitative findings of the survey will be elaborated on and the distribution as well as the ratings of the participating designers discussed. The aim will be to get a first oversight of the generated and most meaningful data. Secondly and more importantly, this section of the article will deal with making sense of the data and formulating concrete findings of the survey. We will try to find answers to some of the decisions and ratings of the designers within the qualitative survey part, where they were able to explain their choices of rating. The statements of the designers will also serve as guides to get a deeper insight and make more precise sense. This way the quantitative findings can be verified through the statements of the designers, and if necessary, alterations can be made. Therefore, through this method, a more holistic finding can be ensured.

4.1. The Consideration of Emotional User/Viewer Responses in the Design Process

The first important question that needs to be answered is to what extent do designers even think about the emotional response of their target audience throughout the design process. This is the elementary basis for ensuring an interest for the topic of creating a more emotional response sensitive design process methodology. The question was answered on a 10 point rating scale (10 - “My decision making is solely based on the expected emotions of the viewer”; 0 - “I do not consider the emotions of the viewer at all”). The average answer rate amounts to a total of 8.03 points. This high rating clearly showcases that there is a high sensitivity of designers concerning the anticipated emotional responses of their target groups. One interesting detail was that amongst designers (with 0-5 years of experience) the rated average was higher than the total average. It was set at 8.25 points, which could be explained through the fact that the idea of UX as well as emotional marketing have increasingly gained attention, and are also an essential part of the design education today. Overall, these rates display that designers are obviously considering the emotional reaction of their target audience, and that the further development of new methods concerning focusing techniques of the anticipated emotional user/viewer response.

4.2. Design Process Stages and the Creative Consideration of the Emotional User/Viewer Response

This serves as groundwork in order to understand if the extended model of Emotional Response Sensitive Design Process can provide a benefit for the already existing and in reality practiced design process. As we have detected, the influence points of the Kansei ideology on the Western concept of design process, it will be essential to see if the survey data reflects the Kansei impact points, or if there are variations. These variations would then display the stages and techniques developed, based on the Kansei ideology, and the base of the Western design process by Aspelund, that would have the greatest potential of changing the approach and work flow of the current design process flow of designers, and could successfully direct the working process towards more targeted emotional response of the target audience.

41% of the designers stated that they are considering the user’s emotional response in the Inspiration phase of the design process. As inspiration may come from users, it is slightly surprising that apparently the emotional response of a no-existing design work can also lead to some sort of inspiration for some designers. For the ideology of Kansei, this has no real impact, as Kansei is concerned with what emotional responses that different concept models trigger and how the audience reacts towards the work. The stage of Inspiration is not a crucial part for understanding the audiences’

Kansei. Nevertheless, 41% of the participating designers did. Here a redirection of attention and time could be helpful if the target is really about creating a visual language that triggers a specific emotional response.

In the stage of Identification, 31% of the designers claim to consider the emotional response of their target audience. This is the third lowest stage rate for the whole design process. Considering Kansei, the stage of Identification is elementary for understanding the end-user constraints and making them an inherent part of the design concept, and therefore the design work itself. A redirection of attention and time from the first stage of Inspiration to the second stage of Identification could be a beneficial change in approach.

A total of 69% and therefore the most chosen stage of importance for emotional response consideration is the stage of Conceptualization. According to Aspelund’s Design Process, “the Conceptualization stage is for formulating a holistic concept” (p. 72). Within this research, the stage of Conceptualization is not considered as an impactful stage specifically for the creation of meeting expected emotional responses of the target audience. The framework is set through the considerations of the previous stage and the implementation of the end-user concerns in the fundament of the concept outline. So, they obviously have to be further considered and explored within this stage, but not reworked or altered, as they should be considered as inherent constraints. The high amount of designers choosing the stage of Conceptualization as a considering stage for the purpose could be related to the fact that within this stage the concept has to be built around the end-user constraints. But for our considerations, we do not see this building process as a consideration of the anticipated emotional response, because the constraints are already set and implemented in the stage of Identification. Within the Conceptualization stage, designers are creating a concept that meets these inherent needs, but they do not reconsider them, and therefore the stage of Conceptualization is about exploring solutions that meet the specified needs but not creating new needs. Again, as in the first stage, the recommendation of distributing this time and effort to the previous stage where these actual needs are formulated and manifested.

The stage of Exploration and Refinement was chosen by 36% of the participating designers. As Aspelund defines this stage as a form of ensuring that the created concept in the stage of Conceptualization is meeting the requirements and needs (p. 98). This can be accomplished through different testing methods. 36% of the designers are stating to consider the emotional response once again in the Exploration and Refinement stage, which conforms to the methodology introduced based on the Kansei ideology. This stage can be considered as a reinsurance phase where emotional responses can be tested on a focus group.

Only 23% of the participants choose the Definition and Modeling as a stage of

consideration. This is the second to the last ranking rate. As this stage is all about objectification of the created concept into a real “thing”, according to our Emotional Response Sensitive Design Process, this stage is elementary. As designers are creating concrete elements of the design work, they have to monitor them, their meanings, their implications, and their compositions. This article introduces two methods that can support this working process. The big difference and the little amount of designers choosing this stage as a considering stage, clearly showcases that fine-tuning of the emotional response concerned working process can be meaningful and lead to some new realizations.

With 67%, the stage of Communication was the top runner-up of the considering stages for anticipated emotional responses. This stage is about finding the right way and method in order to get the message across to the target group. Just like most designers are already practicing it in reality, this is a major take for the Emotional Response Sensitive Design Process. It is clear that these ideas that Kansei might be introducing for this stage are already more present in the Western design process techniques and are not impactful regarding a potential change in the work flow of designers.

The stage of Production was rated at the lowest rate of 21%. This comes as no surprise as this stage is solely about the actual production of the finished design concept and the communication with the producer. As well as for the designers in reality and for the Proposed Emotional Response Sensitive Design Process, this stage is not one where anticipated emotional reactions of the target group should be no longer of any interest.

All in all, it can be summarized that there are two clear front-runners in the rating of the designers. These are the stages of Conceptualization and Communication. The other stages are by around 30% or more behind. The average of designers has chosen 2.82 stages when answering the question of when they are considering the users emotional response the most. When comparing this outcome with the newly developed Emotional Response Sensitive Design Process, there are some clear discrepancies. The major ones are listed below:

- *I. The stage Conceptualization was rated at 69% and therefore strongest stage of consideration of the working process in designers’ reality. The proposed Emotional Response Sensitive Design Process suggests that this stage has no huge relevance in the creation of an anticipated emotional reaction of the targeted audience. So this might be the biggest discrepancy of the current workflow and the newly proposed concept of the design process (Figure 5 and 6).*

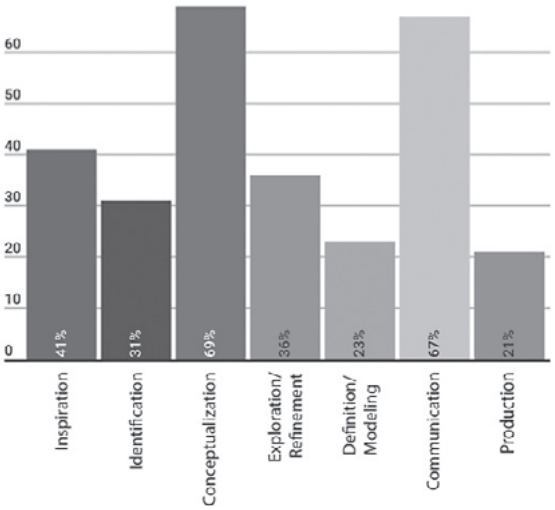

Figure 5. Percentile distribution of chosen design stages for the consideration of emotional audience response

- *II. Only 23% choose the stage of Definition and Modeling as one of the considering stages. As this stage deals with creation of the actual elements of the design work and more concrete with the implications of those elements and their composition as a whole, the proposed Emotional Response Sensitive Design Process considered this stage as an elementary part of the creation process of the anticipated emotional reaction (Figure 5 and 6).*

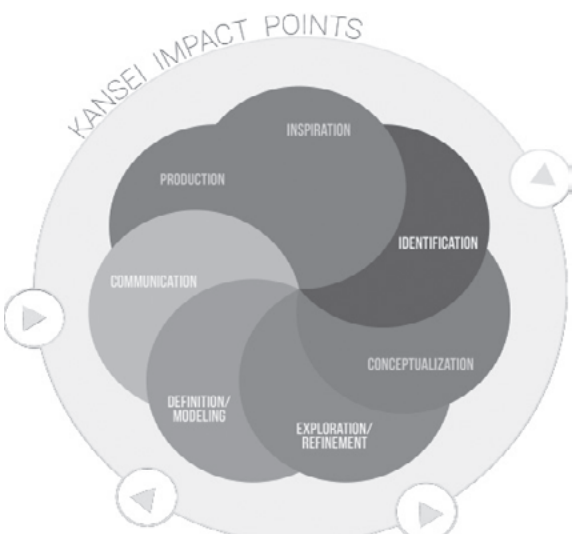

Figure 6. Stages of importance for the consideration of emotional audience response according to the Emotional Response Sensitive Design Process

- *III. The average of designers chooses 2.82 stages where they are actively considering the anticipated emotional responses of their audience in the working process of creation (Figure 7).*

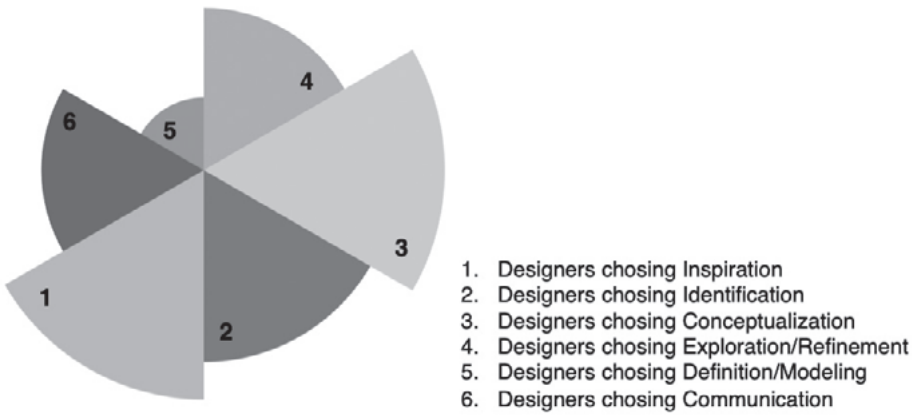

Figure 7. Scale of quantitative amount of designers chose stages for emotional audience response considerations

On the other hand, the major similarity is stated as below:

- *IV. The second to top stage Communication with 67% is also considered as a major driver for creating the anticipated emotional reactions by the Emotional Response Sensitive Design Process (Figure 5 and 6).*

Further numerical data is provided in Appendix, Table 2.

4.3. Elements of Design and Their Rated Emotional Force

As discussed above, the stage of Definition and Modeling is considered to be an important stage for creating a successful interpretation of the anticipated emotional response. Therefore, we wanted to further explore these elements of specifically Print Media design. In order to understand how designers are using these elements and if they feel that there are elements that convey emotional messages with more force than others.

Six elements of Print Media design (Font, Image, Copywriting and Slogan, Color, Proportions, and Form and Shapes) have been selected and rated on a 10-point scale from the participants (Figure 8). In this segment, we will quickly touch upon all these elements and their rates, then come to an overall conclusion on where the elements can be seen as more powerful tools for creating emotional messages than others.

The element **Font** has been rated at an average of 7.03 with a standard deviation of 1.94.

That makes almost the 20% deviation both below and above the average rate. This shows that Font is considered an important tool to convey emotional messages, but ratings are varying to a high degree, which showcases that there is no clear allocation of the rating throughout the group of participating designers.

The element **Image** was rated at an average of 8.28 points. With this rating, it has the highest points within the group of Print Media design elements. The standard deviation is as well the lowest within the group at 1.39, which can be interpreted as a more pinpointed allocation of ratings throughout the group of designers.

The **Copywriting and Slogan** has been rated at 6.33 points, and therefore one of the lowest rates throughout the group of elements. But, even though it might be the lowest rate 6.33 points can still be considered as a moderate rating on a 10-point scale. Another fact that indicates that the participants were not able to achieve a very concise evaluation is the very high standard deviation of 2.60.

At 7.92 points the element of **Color** was rated. With this evaluation it is the second runner-up after the element of Image. The standard deviation amounted to 1.88, which again displays a big amount of variance in the answers of the designers.

The **Proportion** was rated at an average of 6.54 points. The Standard deviation amounts to 1.88.

The element **Shapes and Forms** was rated at the lowest at 6.31 points. Again, even though it might be the lowest of the evaluations, but overall still a moderate rating. The standard deviation amounts to 2.26, which displays a variance of almost 23%.

Overall, the results have to be concluded that there is no clear front-runner of the design elements. The average of the overall rates for all of the elements lies at 7.07 points. That is clearly very high as an overall rating and showcases that most designers choose above the mean value (5) ratings for all of the elements, and could not express a clear favorite element for communicating emotional messages. Another point that makes that very evident, is that the standard deviation of the average points of the individual elements is as low as 0.85. That makes it evident that all of the averages are qualitatively very close in rating points, and there are no big differences in the overall rating of the individual elements. So, basically no element has been singled out in a significant way, that it could be considered as a more effective tool in communicating emotional messages. Therefore, the overall conclusion that has to be drawn is that there is no one element that is much more effective in transmitting emotional messages to the target audience.

In order to solidify this major finding, the qualitative data was drawn into consideration. Words like 'depend' (29 times), 'element(s)' (53 times), 'part' (15 times), 'composition' (11 times) or

'whole' (9 times) have been used by multiple participants when answering the quantitative questions. Since they were always asked to "*please explain the chosen rating of the individual Print Media design elements*", these words of reference to an entirety of a design and that individual elements are just part in it, and do not carry the main weight of the emotional transmission, showcases that the assumptions based on the qualitative facts were correct. The designers do not see certain elements as stronger emotional transmission instruments, but rather as part of the composition that conveys the emotional message as a whole.

- *V. There is no individual element of Print Media design that can be named as the most favorable tool for transmitting emotional messages, as the variations in rating are too insignificant (Figure 4).*

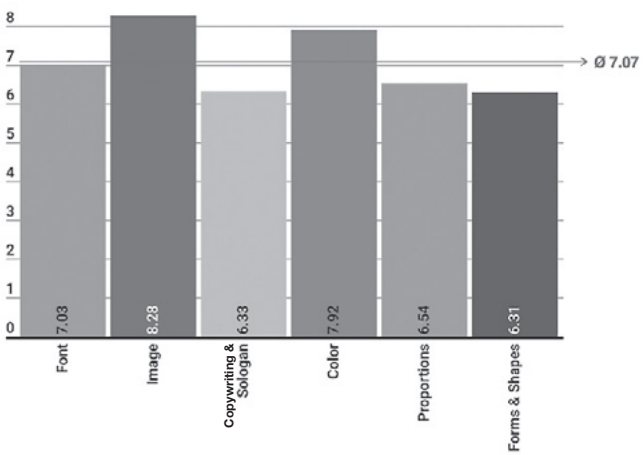

Figure 8. Average distributions of the individual Print media design elements on a 0 - 10 point rating scale.

This finding goes hand in hand with the practices and ideology of Kansei and the Emotional Response Sensitive Design Process. As Kansei Engineering (KE) believes that every element has an impact, and therefore a high importance, as the individual high averages show, on the emotional response as well as the composition as a whole, as the small standard deviation of the overall element average shows. Specifically, in the Definition and Modeling stage it is all about understanding these differences and nuances of the individuale elements and the composition, which in the end lead to the exact target of the anticipated emotional reaction. The methodologies introduced by the Emotional Response Sensitive Design Process clearly reflect this importance as they are asking designer to categorize and evaluate the individual elements and the design as a whole. What has not become

evident is, if the designers see all of the elements similarly important, because they are paying the same amount of attention to them when they are creating the designs, or if they rated them all so similar as they see them as a part of the entire design, which overall then has a very similar rating. Some of the qualitative answers provide some sort of insight, that point towards the idea of elements being a part of a whole, but further research would be necessary to come to a clear conclusion. As far as the collected data of this research goes, some tendencies can be concluded and new research questions formulated.

4.4. Knowledge about Kansei in the Design Community

The survey ended with the question about if Kansei was a known term or not. A total of 90% does not know what Kansei or KE is. As UX is gaining more influence on the design process in all fields of design, this should come as a surprise as Kansei delivers a long standing philosophy and delivers years and years of actual experience in the translation of end-user needs and expectations into finished design. Surely, these techniques have been predominantly used in the area of product development and industrial design. This research clearly shows how the ideology of Kansei can be implemented into the general design process and, in particular, into the Print Media design process.

5. Discussion on the Survey Findings

Firstly, it has to be stated once again that this research is not proposing a generally ‘better’ design process. The Emotional Response Sensitive Design Process model is about focusing on the design processes, if the goal is to create a more predictable emotional response of the target audience. So, the main question to be answered by this survey was, on the one hand, whether there is an interest in an extended design process model, that can lead to a more predictable emotional response from the audience. As participating designers stated that on an average of 8.03 points they are considering the emotional responses of their users and determining their creative process based on these, it clearly shows that there is a major interest in the field of predicting emotional responses of target audiences. As a consequence, we can assume that techniques and models created for specific success in the field of predicting emotional responses are of interest and have a high chance of changing the reality of a designer workflow.

The second part was to see if these created alterations of the Emotional Response Sensitive Design Process maybe intrinsically already exist in the everyday working process of designers, we wanted to figure out when they are considering these emotional responses according to the design process model of Aspelund. This analysis showcases that there is an existing potential to benefit from the shift in time and attention throughout the design process. Especially evident, is the front-

runner stage of Conceptualization with 69%, which is according to the proposed Emotional Response Sensitive Design Process not considered as a driving stage of consideration regarding participation of emotional responses. An example for the other extreme is the stage of Definition and Modeling, which is considered as an influential stage for alterations and adjustments for exploring the emotional responses of the target audience. This stage was only rated at an amount of 23%.

On average, the designers have chosen 2.87 stages where they are considering these emotional responses. With the proposed design process in mind, a general expansion of time and effort would be a sensible adjustment, if the predictability of my users' emotional response is to be increased.

When considering the importance of the Definition and Modeling stage of the process, it was elementary to derive data, which allowed us to understand which elements of Print Media design are considered to transmit these emotional messages in the most effective way. Overall, it could be concluded that this is not a particularly effective tool for transmitting emotional messages, as the data derived from the survey showed only insignificant differences and the overall standard deviation of the elements average rating was only 0.85. It remains unclear whether this is the case because, when coding emotional messages, designers consider all elements to be equally important or effective, whether or they have been assessed similarly because they are all seen as a part of a larger concept, and therefore equally important and not as a single element, which may lead to a change in perception.

Overall, it can be stated that the Emotional Response Sensitive Design Process model can lead to an improvement of the designers' workflow in regards to a higher success in predicting the emotional responses of the target group. Since there are a large number of variants of the workflow considerations of the designers involved and the new model, it is to be expected that the newly introduced methods and ideas would lead to a higher predictability of the emotional reactions. As 90% of the Print Media design community did not know what Kansei was, we could expect that if Kansei was introduced to the design communities in conjunction with its high relevance to UX design, it could generate a lot of interest and actual changes in the design practice workflow.

6. Conclusion

This article was directed towards the goal of understanding, whether there is any interest and need for an extended model of the Emotional Response Sensitive Design Process within the design community, or whether the proposed model and its techniques may be carefully examined through specific lenses to help inform the Print Media and Graphic designers conscious experience, and thereby their design processes. Due to the conduction of a design survey, the generated data

allowed an analysis of the designers’ workflow through the design process. Through a comparative analysis of the proposed model of the Emotional Response Sensitive Design Process, correlations and ambiguities could be detected and potential areas of benefit were identified.

The main areas of benefit from the Emotional Response Sensitive Design Process, that have been identified, are firstly the highest rate of designers processing predictability of emotional viewer responses within the stage of Conceptualization. According to the Emotional Response Sensitive Design Process model, this consideration should be part of the Identification stage where constraints are set and making particularly user constraints an inherent element of the concept framework. The stage of Conceptualization should not be directly concerned with these sort of questions, as this stage serves the purpose of developing a holistic design concept within the parameters of the concept frameworks and its constraints, which makes them an indirect influence on the decision making process, but not an active consideration part of this stage. Another main benefit area is the stage of Definition and Refinement. It only collected a low rating within the survey, even though the Emotional Response Sensitive Design Process model considers it an elementary part, as the shape and forms of the physical appearance of the design work become more concrete. As mentioned already, this stage is considered crucial as the decisions are made about how constraints and the concept are translated into physicality. More attention and focus on this part of the design process could lead to a better anticipation of the emotional responses.

All in all, it can be concluded that the Emotional Response Sensitive Design Process can strongly support the goal of attaining a more successful prediction of emotional viewer responses This extended and ‘Kansei-induced’ design process model does in fact create some new perspectives on the traditional workflow process. As the survey data has clearly showed that there is an extensive interest of designers in the emotional users responses, but the data has also shown that, even though the emotional response was evaluated with great importance for the design process, it does not translate into the actual working process of designers. The Emotional Response Sensitive Design Process provides alterations and methods, that can make designers better understand the initial emotional reactions and psychology of their target users, which ultimately will allow them to create design works, that will lead to a more satisfactory UX. The Kansei philosophy and its implications for the design process and its influence on the human instant evaluation system, is an area of high interest. If utilized to full potential, it bears great opportunities for understanding the visual language on a deep emotional perceptive level. The Emotional Response Sensitive Design Process model is the first step in utilizing this powerful philosophy for the field of conceptual design.

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Appendix

1* How many years of expirence do you have as a Designer?

- ☐ 0 - 5 years
- ☐ 6 - 10 years
- ☐ 11 - 15 years
- ☐ 16 - 20 years
- ☐ 21 years and more

2* To what extent do you consider the emotional response of the viewer when making design decisions for print media advertisements?
(10 - "My decision making is solely based on the expected emotions of the viewer"; 0 - "I do not consider the emotions of the viewer at all")

	10	9	8	7	6	5	4	3	2	1	0
Strength of consideration	○	○	○	○	○	○	○	○	○	○	○

3* In which stage of the design process do you consider users emotional response the most? (choosing multiple stages is possible)

- ☐ Inspiration
- ☐ Identification
- ☐ Conceptualization
- ☐ Exploration/ Refinement
- ☐ Definition/ Modeling
- ☐ Communication
- ☐ Production

4* How would you rate the emotional impact of the element FONT to influence the design of Print Media Advertisement in your experience?
(10 - "The emotional message is solely conveyed through this element"; 0 - "The emotional message is not impacted at all through this element")

	10	9	8	7	6	5	4	3	2	1	0
Strength of Impact	○	○	○	○	○	○	○	○	○	○	○

Table 1a. Online Survey Questionnaire

5* Please explain your rating choice briefly

6* How would you rate the emotional impact of the element IMAGE to influence the design of Print Media Advertisement in your experience?
(10 - "The emotional message is solely conveyed through this element"; 0 - "The emotional message is not impacted at all through this element")

	10	9	8	7	6	5	4	3	2	1	0
Strength of Impact	○	○	○	○	○	○	○	○	○	○	○

7* Please explain your rating choice briefly

8* How would you rate the emotional impact of the element COPYWRITING/SLOGAN to influence the design of Print Media Advertisement in your experience?
(10 - "The emotional message is solely conveyed through this element"; 0 - "The emotional message is not impacted at all through this element")

	10	9	8	7	6	5	4	3	2	1	0
Strength of Impact	○	○	○	○	○	○	○	○	○	○	○

9* Please explain your rating choice briefly

10* How would you rate the emotional impact of the element COLOR to influence the design of Print Media Advertisement in your experience?
(10 - "The emotional message is solely conveyed through this element"; 0 - "The emotional message is not impacted at all through this element")

	10	9	8	7	6	5	4	3	2	1	0
Strength of Impact	○	○	○	○	○	○	○	○	○	○	○

Table 1b. Online Survey Questionnaire

11* Please explain your rating choice briefly

12* How would you rate the emotional impact of the element PROPORTION to influence the design of Print Media Advertisement in your experience?
(10 - "The emotional message is solely conveyed through this element"; 0 - "The emotional message is not impacted at all through this element")

	10	9	8	7	6	5	4	3	2	1	0
Strength of Impact	○	○	○	○	○	○	○	○	○	○	○

13* Please explain your rating choice briefly

14* How would you rate the emotional impact of the element FORMS AND SHAPES to influence the design of Print Media Advertisement in your experience?
(10 - "The emotional message is solely conveyed through this element"; 0 - "The emotional message is not impacted at all through this element")

	10	9	8	7	6	5	4	3	2	1	0
Strength of Impact	○	○	○	○	○	○	○	○	○	○	○

15* Please explain your rating choice briefly

16* Do you know Kansei or Kansei Engineering?

- ☐ yes
- ☐ no

Table 1c. Online Survey Questionnaire

	Years of Experience					Consideration of Emotional Viewer Response	Stage of Viewers Emotional Response Consideration							Total Amount	FONT	IMAGE	SLOGAN	COLOR	PROPORT	FORMS & SHAPES		Knowledge of Kansei?		Date	Time Taken	Country	Regio	Completed
	0-5	6-10	11-15	16-20		21 and more	Inspiration	Identification	Conceptualization	Exploration	Definition	Communication	Production		Strength o	Strength o	Strength o	Strength o	Strength o	Strength	of Impact	Yes	No					
1				1		10		1	1	1	1	1	1	6	8	8	8	8	8	8			1	2016-02-15	372	TR		TRUE
2	1					8	1	1	1	1	1	1		6	9	9	5	9	9	9			1	2016-02-15	644	TR	31	TRUE
3			1			9		1	1			1		3	8	8	9	9	8	8			1	2016-02-15	290	TR	16	TRUE
4	1					9	1		1	1	1	1		5	8	8	9	9	8	6			1	2016-04-04	2114	CA	QC	TRUE
5				1		8	1					1		2	9	10	10	10	10	10			1	2016-04-04	802	FR	A8	TRUE
6		1				8			1		1	1		3	10	10	1	9	7	8			1	2016-04-05	3456	DE	5	TRUE
7	1					8		1	1			1		3	7	8	4	9	9	3			1	2016-04-05	578	DE		TRUE
8		1				5						1		1	10	8	8	9	7	2			1	2016-04-05	222	TR	34	TRUE
9		1				9							1	1	10	9	9	10	7	9			1	2016-04-05	486	US		TRUE
10		1				9		1				1		2	7	9	6	9	6	8			1	2016-04-11	2981			TRUE
11	1					9	1		1	1				3	8	8	8	5	5	5			1	2016-04-18	37153	CO	33	TRUE
12	1					8		1						1	7	10	7	8	7	5			1	2016-04-18	256	CO	33	TRUE
13	1					8	1		1			1		3	10	10	8	8	5	6			1	2016-04-18	367			TRUE
14	1					7	1	1		1		1		4	6	10	8	9	8	7			1	2016-04-21	468	US		TRUE
15	1					9	1	1	1	1		1	1	6	7	10	9	10	7	7			1	2016-04-26	497	NZ	E9	TRUE
16			1			6	1	1		1				3	9	4	3	9	5	4			1	2016-04-26	1095	FR		TRUE
17					1	8			1					1	6	8	3	5	7	2		1		2016-04-28	507	US	PA	TRUE
18		1				8	1		1			1	1	4	3	10	8	6	2	2			1	2016-04-28	600	AU	08	TRUE
19	1					10		1	1	1	1	1	1	6	8	6	3	8	8	3			1	2016-04-28	749	ES	29	TRUE
20				1		10	1	1	1	1	1	1		6	6	6	6	6	6	6		1		2016-04-28	351	US		TRUE
21	1					8	1		1					2	6	9	1	8	6	7			1	2016-04-29	625	BR		TRUE
22			1			7			1			1	1	3	5	8	9	8	7	8			1	2016-05-01	331			TRUE
23		1				8			1			1		2	8	8	3	9	7	7			1	2016-05-05	562	DE	07	TRUE
24					1	6	1		1			1		3	6	8	8	7	5	6			1	2016-05-08	1015	US	NJ	TRUE
25				1		8			1		1	1	1	4	7	8	8	8	8	8			1	2016-05-09	1140	TR		TRUE
26	1					7			1	1				2	4	10	7	5	7	5			1	2016-05-10	956	EU		TRUE
27	1					6						1		1	5	5	4	10	3	4			1	2016-05-10	212	DE	07	TRUE
28			1			5	1		1			1		3	4	8	6	6	5	6			1	2016-05-10	503	MY	14	TRUE
29	1					8				1				1	5	7	6	9	7	9			1	2016-05-10	1282	US	PA	TRUE
30			1			9			1			1		2	8	8	8	8	9	9			1	2016-05-11	1180	ID	04	TRUE
31	1					9							1	1	10	9	8	10	10	10			1	2016-05-11	870	IN	07	TRUE
32				1		8	1		1	1		1		4	8	8	3	8	5	5			1	2016-05-11	371	IE	11	TRUE
33		1				9		1	1	1				3	7	9	7	9	6	7			1	2016-05-11	1152	MY	16	TRUE
34	1					9	1				1	1		3	8	8	9	8	7	9			1	2016-05-11	1932	CO	33	TRUE
35				1		8			1					1	5	8	8	6	3	5			1	2016-05-12	1648			TRUE
36		1				4						1		1	3	8	4	2	5	4		1		2016-05-13	614	AE		TRUE
37		1				9			1	1				2	6	8	2	8	3	4			1	2016-05-17	665	ES		TRUE
38		1				9	1		1		1	1		4	5	7	4	7	7	7		1		2016-05-17	755			TRUE
39			1			10			1					1	8	10	10	8	6	8			1	2016-05-19	145	MX	19	TRUE
SUM	15	10	6	6	2		16	12	27	14	9	26	8	112								4	35					
%	38%	26%	15%	15%	5%		41%	31%	69%	36%	23%	67%	21%															
AVARAGE						8.03								2.87	7.03	8.28	6.33	7.92	6.54	6.31	7.07							
ST DEV																												
						1.42									1.94	1.39	2.60	1.72	1.88	2.26	0.85							

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